

**PATENT**  
**Application # 10/003,636**  
**Attorney Docket # 2001-0163A (1014-150)**

**REMARKS**

The Examiner is respectfully thanked for the consideration provided to this application. Reconsideration of this application is respectfully requested in light of the foregoing amendments and the following remarks.

Each of 9, 11-20, and 25-31 has been amended for at least one reason unrelated to patentability, including at least one of: to explicitly present one or more elements implicit in the claim as originally written when viewed in light of the specification, thereby not narrowing the scope of the claim; to detect infringement more easily; to enlarge the scope of infringement; to cover different kinds of infringement (direct, indirect, contributory, induced, and/or importation, etc.); to expedite the issuance of a claim of particular current licensing interest; to target the claim to a party currently interested in licensing certain embodiments; to enlarge the royalty base of the claim; to cover a particular product or person in the marketplace; and/or to target the claim to a particular industry.

Claims 9, 11-20, and 25-31 are now pending in this application. Each of claims 9, 11-20, and 25-31 are in independent form.

**I. The Objections to Claims 11, 12, 16, 19, and 25-31**

Each of claims 11, 12, 16, 19, and 25-31 was objected to for containing an acronym. Each of claims 11, 12, 16, 19, and 25-31 has been amended to spell out this acronym. Therefore, it is respectfully submitted that any grounds for these objections has been removed, and respectfully request acknowledgment thereof.

**II. The Obviousness Rejections**

Each of claims 9, 11-20, 25-31 was rejected under 35 U.S.C. 103(a) as being unpatentable over various combinations of Hebsgaard (U.S. Publication No. 2004/0218589), Beser (U.S. Patent No. 6,807,193), Giacopelli (U.S. Publication No. 2002/010826), Moore (U.S. Patent No. 6,807,195) Lee (U.S. Patent No. 6,529,520) and/or Rabenko (U.S. Patent No. 6,763,032). These rejections are respectfully traversed.

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**A. *Prima Facie* Criteria**

Over 50 years ago, in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), the Supreme Court established factors regarding the factual inquiry required to establish obviousness. The factors include:

1. determining the scope and contents of the prior art;
2. ascertaining differences between the prior art and the claims at issue;
3. resolving the level of ordinary skill in the pertinent art; and
4. considering objective evidence indicating obviousness or nonobviousness.

The Federal Circuit has applied *Graham*'s required factual inquiry in numerous legal precedents that are binding on the USPTO.

It is recognized that most patentable inventions arise from a combination of old elements and often, each element is found in the prior art. *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998). However, mere identification in the prior art of each element is insufficient to defeat the patentability of the combined subject matter as a whole. *Id.* at 1355, 1357.

Instead, “[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach... all the claim limitations.” *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP 2143.

Moreover, the “Patent Office has the initial duty of supplying the factual basis for its rejection.” *In re Warner*, 379 F.2d 1011, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057, *reh'g denied*, 390 U.S. 1000 (1968). “It may not... resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis”. *Id.*

It is legal error to “substitute[] supposed *per se* rules for the particularized inquiry required by section 103. It necessarily produces erroneous results.” *See, In re Ochiai*, 71 F.3d 1565, 1571, 37 USPQ2d 1127, 1132-33 (Fed. Cir. 1998); *In re Wright*, 343 F.2d 761, 769-770, 145 USPQ 182, 190 (CCPA 1965).

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“Once the examiner... carries the burden of making out a *prima facie* case of unpatentability, ‘the burden of coming forward with evidence or argument shifts to the applicant.’” *In re Alton*, 76 F.3d 1168, 37 USPQ2d 1578 (Fed. Cir. 1996) (*quoting In re Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444).

None of the applied portions of the references relied upon in the Office Action, whether considered alone or in combination, establish a *prima facie* case of obviousness.

**B. Missing Claim Limitations**

**1. Claim Limitations - 1**

Each of independent claims 9, 11-20, and 25-31 recites, *inter alia*, yet the applied portions of the relied upon references fail to teach, “said subintervals comprising a data+signaling interval and a voice interval, a plurality of unsolicited grants for said voice interval packed away from the data+signaling interval in order to form a single hole adjoining the data+signaling interval, wherein when a voice call termination leaves a gap among the plurality of unsolicited grants, the gap is closed by a movement of one or more of the plurality of unsolicited grants away from the data+signaling interval”.

**2. Claim Limitations - 2**

Each of independent claims 9, 11-20, 25, and 26 recites, *inter alia*, yet the applied portions of the relied upon references fail to teach, “partitioning the map interval into” “a request interval, a management interval, a data+signaling interval, and a voice interval”.

Independent claim 27 recites, *inter alia*, yet the applied portions of the relied upon references fail to teach, “flexibly partitioning the map intervals into a plurality of sub intervals based upon bandwidth requirements of the sub intervals, the sub intervals comprising at least a data+signaling interval and a voice interval”.

Each of claims 28-31 recites, *inter alia*, yet the applied portions of the relied upon references fail to teach, “said subintervals comprising a data+signaling interval and a voice interval”.

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Regarding this claimed subject matter of claims 9, 11-20, and 25-31, the present Office Action presents various unsupported assertions. For example, the present Office Action recites, referring to Hebsgaard, "page 1 paragraph 0006; MAP information consists of a request region, maintenance region and data region, it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data". *See e.g., page 3 regarding claim 9; page 5 regarding claim 10.*

Yet page 1 paragraph 0006 of Hebsgaard allegedly recites:

MAP information is transmitted on one or more downstream channels by the cable modem termination system to all of the cable modems on a given frequency channel. As is well known in the art, MAP information covers all time periods on an upstream channel. MAP information typically consists of the combination of one or more of the following: request regions (i.e., the contention area that a modem can request new band width), request/data regions (where both data and request can be transmitted), initial maintenance regions (where new modems have the right to try and sign on), station maintenance regions (for modems that are in operation), and short and long data grant regions (for transmitting data). The short and long data grants may either be based on a request or can also be unsolicited grants. The MAP will consist of a combination of these regions, all as decided by the MAP generator.

Applicant respectfully asks:

- b. regarding each of independent claims 9, 11-20, 25-31, where does this applied portion of Hebsgaard teach "**a voice interval**"?
- c. regarding each of independent claims 9, 11-20, 25-31, where does this applied portion of Hebsgaard teach "**a data+signaling interval, and a voice interval**"?
- d. regarding each of independent claims 9, 11-20, 25, and 26, where does this applied portion of Hebsgaard teach "**partitioning the map interval into**" "**a request interval, a management interval, a data+signaling interval, and a voice interval**"?

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- e. regarding each of independent claims 28-31, where does this applied portion of Hebsgaard teach “partitioning the map interval into” “a plurality of sub intervals based upon bandwidth requirements of the sub intervals, the sub intervals comprising at least a data+signaling interval and a voice interval”?
- f. regarding each of independent claims 28-31, where does this applied portion of Hebsgaard teach “said subintervals comprising a data+signaling interval and a voice interval”?

Applicant respectfully submits that the applied portions of Hebsgaard do not teach these claimed limitations. The applied portions of the remaining relied upon references do not overcome at least these deficiencies of Hebsgaard.

### **3. Claim Limitations - Conclusion**

Thus, even if there were motivation or suggestion to modify or combine the applied portions of the references relied upon in the Office Action (an assumption that is respectfully traversed), and even if there were a reasonable expectation of success in combining or modifying the applied portions of the references relied upon in the Office Action (another assumption that is respectfully traversed), the applied portions of the references relied upon in the Office Action, as attempted to be modified and/or combined, still do not expressly or inherently teach or suggest every limitation of at least independent claims 9, 11-20, and 25-27, and consequently fail to establish a *prima facie* case of obviousness. Consequently, for at least the reasons mentioned above, reconsideration and withdrawal of these rejections is respectfully requested.

### **C. No Motivation or Suggestion to Modify the Applied Reference**

Under the *Graham* analysis, the “examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.” MPEP 2142. The requirements for meeting this burden are clear.

To factually support a *prima facie* conclusion of obviousness, an Office Action must clearly and objectively prove “the reasons one of ordinary skill in the art would have been motivated to select the reference[]”. *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459

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(Fed. Cir. 1998); *In re Johnston*, 435 F.3d 1381 (Fed. Cir. 2006).

Further, when an obviousness rejection is based on modifying a reference, the Office Action must clearly and objectively prove the desirability of the proposed modification. “The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.” *In re Fritch*, 972 F.2d 1260, 23 USPQ 2d 1780, 1783-784 (Fed. Cir. 1992) (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988)). In that same case, the Federal Circuit further held that it “is impermissible to use the claimed invention as an instruction manual or ‘template’ to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that ‘[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecated the claimed invention.’” *Id.*, 23 USPQ 2d at 1784.

Further, a bald assertion of knowledge generally available to one of ordinary skill in the art to bridge the evidentiary gap is improper. Such unfounded assertions are not permissible substitutes for evidence. *See, In re Lee*, 277 F.3d 1338, 1435, 61 USPQ2d 1430, 1435 (Fed. Cir. 2002). That is, deficiencies of the cited references can not be remedied by general conclusions about what is basic knowledge or common sense to one of ordinary skill in the art. *In re Zurko*, 258 F.3d 1379, 1385-86 (Fed. Cir. 2001).

Yet the present Office Action impermissibly makes repeated “unfounded assertions” alleging obviousness. That is, the present Office Action cites absolutely no supporting factual evidence for its conclusions that:

1. “[r]egarding claim 9” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 3.*
2. “[r]egarding claim 19” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 5.*
3. “[r]egarding claim 30” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 6.*
4. “[r]egarding claim 11” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 7.*

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5. “[r]egarding claim 12” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 9.*
6. “[r]egarding claim 25” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Pages 10-11.*
7. “[r]egarding claim 26” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 12.*
8. “[r]egarding claim 26” “it is further obvious to one of ordinary skill in the art that once a voice call is deactivated and silence is detected, more media, e.g. video, data, and/or audio, could be transmitted in its place”. *See Page 13.*
9. “[r]egarding claim 13” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 14.*
10. “[r]egarding claim 13” “it is obvious to one of ordinary skill in the art that every time a voice call is activated a UG is used”. *See Page 14.*
11. “[r]egarding claim 14” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 15.*
12. “[r]egarding claim 14” “it is obvious to one of ordinary skill in the art that every time a voice call is activated a UG is used”. *See Page 15.*
13. “[r]egarding claim 14” “it is further obvious to one of ordinary skill in the art that once a voice call is deactivated and silence is detected, more media, e.g. video, data, and/or audio, could be transmitted in its place”. *See Page 15.*
14. “[r]egarding claim 15” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 16.*
15. “[r]egarding claim 15” “it is obvious to one of ordinary skill in the art that every time a voice call is activated a UG is used”. *See Page 16.*
16. “[r]egarding claim 15” “it is further obvious to one of ordinary skill in the art that once a voice call is deactivated and silence is detected, more media, e.g. video, data, and/or audio, could be transmitted in its place”. *See Pages 16-7.*
17. “[r]egarding claim 29” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 17.*

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18. “[r]egarding claim 16” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Pages 18-19.*
19. “[r]egarding claim 18” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Pages 20-21.*
20. “[r]egarding claim 20” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 21-22.*
21. “[r]egarding claim 27” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 22.*
22. “[r]egarding claim 31” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Pages 25 and 26.*

Notably, the present Office Action fails to respond in any manner to comparable arguments presented at pages 12-14 of the Office Action Reply dated 12 April 2006.

Thus, the present Office Action fails to establish a *prima facie* case of obviousness regarding at least claims 9, 11-16, 18, 19, 20, 25, 26, 27, 29, 30, and 31, for at least the reason that the Office Action presents no explanation regarding why the proffered modifications would have been obvious to one of ordinary skill in the art at the time the invention was made.

#### **D. No Motivation or Suggestion to Combine the Applied References**

Under the *Graham* analysis, the “examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.” *See, MPEP 2142.* The requirements for meeting this burden are clear.

To factually support a *prima facie* conclusion of obviousness, an Office Action must clearly and objectively prove “the reasons one of ordinary skill in the art would have been motivated to select the references”. *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998); *In re Johnston*, 435 F.3d 1381 (Fed. Cir. 2006).

Further, “the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed” (emphasis added). *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998);

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*In re Sang-Su Lee*, 277 F.3d 1338, 1342, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

To show these reasons, “[p]articular findings must be made”. *In re Kotzab*, 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). Such factual findings must be supported by “concrete evidence in the record”. *In re Zurko*, 258 F.3d 1379, 1385-86, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001).

Moreover, a showing of combinability must be “clear and particular”. *In re Dembiczaik*, 175 F.3d 994, 999, 50 USPQ2d 1614, 161(Fed. Cir. 1999). That strong showing is needed because, “obviousness requires proof ‘that the skilled artisan . . . would select the elements from the cited prior art references for combination in the manner claimed’”. *In re Johnston*, 435 F.3d 1381 (Fed. Cir. 2006) (quotation omitted) (emphasis added).

Thus, the Office Action must clearly, particularly, and objectively prove some “suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to”:

“select the references”;

“select the teachings of [the] separate references”; and

“combine [those teachings] in the way that would produce the claimed” subject matter.

*In re Johnston*, 435 F.3d 1381 (Fed. Cir. 2006) (internal citations omitted). *See also, In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998) (discussing “the test of whether it would have been obvious to select specific teachings and combine them as did the applicant”) (emphasis added); and *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985) (“When prior art references require selective combination... to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gleaned from the invention itself.”). “The absence of . . . a suggestion to combine is dispositive in an obviousness determination.” *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579, 42 USPQ2d 1378, 1383 (Fed. Cir. 1997).

Further, these requirements apply regardless of whether the Office Action relies upon modifying or combining purported teachings.

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Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious modification of the prior art. The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the **desirability** of the modification.... It is impermissible to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

*In re Fritch*, 972 F.2d 1260, 23 USPQ 2d 1780, 1783-1784 (Fed. Cir. 1992) (*citing In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991); *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985); and *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988) (internal quotations omitted) (emphasis added)).

Applicant reiterates that a bald assertion of knowledge generally available to one of ordinary skill in the art to bridge the evidentiary gap is improper. Such unfounded assertions are not permissible substitutes for evidence. *See, In re Lee*, 277 F.3d 1338, 1435, 61 USPQ2d 1430, 1435 (Fed. Cir. 2002). That is, deficiencies of the cited references can not be remedied by general conclusions about what is basic knowledge or common sense to one of ordinary skill in the art. *In re Zurko*, 258 F.3d 1379, 1385-86 (Fed. Cir. 2001).

Yet the present Office Action presents no proof, no concrete evidence, and notably no evidence whatsoever, of any “suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to”:

1. “select the references”;
2. “select the teachings of [the] separate references”; or
3. “combine [those teachings] in the way that would produce the claimed invention”.

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The present Office Action presents **no proof, no concrete evidence, and indeed no evidence, of anything** "in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination."

In the claim rejections of each of the following examples, the present Office Action presents **no proof, no concrete evidence, and notably no evidence whatsoever, of any "suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to":**

1. "select the references";
2. "select the teachings of [the] separate references"; or
3. "combine [those teachings] in the way that would produce the claimed invention".

Instead, regarding the proffered combinations, the present Office Action merely, inadequately, and thus improperly recites:

1. At Page 4, "[r]egarding claim 9" and a proffered combination of Hebsgaard, Beser, and Giacopelli:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ... [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Beser by incorporating the method of bandwidth sharing taught by Giacopelli. The motivation for creating such a modification being, to increase the efficiency of network traffic control though the use of bandwidth management techniques.

2. At Pages 5-6, "[r]egarding claim 19" and a proffered combination of Hebsgaard, Giacopelli, and Beser:

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[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard by incorporating the method of bandwidth sharing taught by Giacopelli. **The motivation for creating such a modification being, to increase the efficiency of network traffic control though the use of bandwidth management techniques ...** [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Giacopelli by incorporating the method of allocating bandwidth taught by Beser. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system.**

3. At Pages 6-7, “[r]egarding claim 30” and a proffered combination of Hebsgaard, Beser, and Giacopelli:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ...** [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Beser by incorporating the method of bandwidth sharing taught by Giacopelli. **The motivation for creating such a modification being, to increase the efficiency of network traffic control though the use of bandwidth management techniques.**

4. At Pages 7-9, “[r]egarding claim 11” and a proffered combination of Hebsgaard, Beser, and Rabenko:

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[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ...** [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Beser by incorporating the MAP design of Rabenko. **The motivation for such a modification being to synchronize voice packet sampling with cable modem system grant processing when transmitting packet based voice using cable modems.**

5. At Pages 9-10, "[r]egarding claim 12" and a proffered combination of Hebsgaard, Beser, and Rabenko:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ...** [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Beser by incorporating the MAP design of Rabenko. **The motivation for such a modification being to synchronize voice packet sampling with cable modem system grant processing when transmitting packet based voice using cable modems.**

6. At Pages 11-12, "[r]egarding claim 25" and a proffered combination of Hebsgaard, Beser, and Rabenko:

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[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ...** [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Beser by incorporating the MAP design of Rabenko. **The motivation for such a modification being to synchronize voice packet sampling with cable modem system grant processing when transmitting packet based voice using cable modems.**

7. At Page 13, "[r]egarding claim 26" and a proffered combination of Hebsgaard, Beser, and Rabenko:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ...** [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Beser by incorporating the MAP design of Rabenko. **The motivation for such a modification being to synchronize voice packet sampling with cable modem system grant processing when transmitting packet based voice using cable modems.**

8. At Pages 14-15, "[r]egarding claim 13" and a proffered combination of Hebsgaard and Beser:

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[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system.**

9. At Page 16, “[r]egarding claim 14” and a proffered combination of Hebsgaard and Beser:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system.**

10. At Page 17, “[r]egarding claim 15” and a proffered combination of Hebsgaard, and Beser:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system.**

11. At Page 18, “[r]egarding claim 29” and a proffered combination of Hebsgaard, and Beser:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. **The motivation for creating such a modification being, to**

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**provide an efficient method of transmitting data traffic  
between a modem and termination system.**

12. At Page 19, “[r]egarding claim 16” and a proffered combination of Hebsgaard, and Moore:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of [sic] Hebsgaard and Beser by incorporating the current DOCSIS standard taught by Moore. The motivation for such a modification being an improved system of transmitting packet voice traffic that minimizes latency and jitter.

13. At Pages 21, “[r]egarding claim 18” and a proffered combination of Hebsgaard, and Giacopelli:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard by incorporating the method of bandwidth sharing taught by Giacopelli. The motivation for creating such a modification being, to increase the efficiency of network traffic control through the use of bandwidth management techniques.

14. At Pages 22, “[r]egarding claim 20” and a proffered combination of Hebsgaard, and Lee:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard by incorporating the method taught by Lee. The motivation for such a modification being a simple method for allocating bandwidth dynamically to adapt to the changing number of requests.

15. At Pages 23, “[r]egarding claim 27” and a proffered combination of Hebsgaard, Beser, and Moore:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of

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allocating bandwidth taught by Beser into the Hebsgaard's map. The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ... [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of [sic] Hebsgaard and Beser by incorporating the current DOCSIS standard taught by Moore. The motivation for such a modification being an improved system of transmitting packet voice traffic that minimizes latency and jitter.

16. At Pages 24-25, “[r]egarding claim 25” and a proffered combination of Hebsgaard, Beser, and Rabenko:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map. The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ... [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Beser by incorporating the MAP design of Rabenko. The motivation for such a modification being to synchronize voice packet sampling with cable modem system grant processing when transmitting packet based voice using cable modems.
17. At Pages 26-27, “[r]egarding claim 31” and a proffered combination of Hebsgaard, Beser, Giacopelli, and Lee:

[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of allocating bandwidth taught by Beser into the Hebsgaard's map.

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**The motivation for creating such a modification being, to provide an efficient method of transmitting data traffic between a modem and termination system ... [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Hebsgaard and Beser by incorporating the method of bandwidth sharing taught by Giacopelli. The motivation for creating such a modification being, to increase the efficiency of network traffic control though the use of bandwidth management techniques ... [i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hebsgaard by incorporating the method taught by Lee. The motivation for such a modification being a simple method for allocating bandwidth dynamically to adapt to the changing number of requests.**

Applicant respectfully asks where do any of these bald assertions objectively prove any "suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to":

"select the references"?

"select the teachings of [the] separate references"?

"combine [those teachings] in the way that would produce the claimed" subject matter.

Applicant respectfully submits that these assertions fail to establish a *prima facie* case of obviousness regarding any rejection of claims 9, 13-16, 18-20, 25-27, and 29-31.

In response to comparable persuasive arguments presented in the Office Action Reply dated 12 April 2006, the present Office Action asserts:

On Pages 13-23, the Applicant respectfully traverses that the Office Action fails to provide any suggestion, motivation, or teaching in the prior art that would have led to the obviousness of making such combinations. The examiner respectfully disagrees with the Applicant. It would have been obvious to make such

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modifications because each of the applied references is within the field of the Applicants invention. Each of the applied references alone provide an expectation of success within that field, thus there is a motivation to combine them together.

As an initial matter Applicant respectfully submits that no legal support exists or is provided that would provide any evidence that this assertion is sufficient to establish a *prima facie* case of obviousness. Moreover, this assertion provides no evidence of any "suggestion, motivation, or teaching in the prior art that would have led a person of ordinary skill in the art to":

- "select the references",
- "select the teachings of [the] separate references", or
- "combine [those teachings] in the way that would produce the claimed" subject matter.

Consequently, each of the above-cited rejections in the present Office Action fails to present the required proof of obviousness. For at least these reasons, Applicant respectfully requests withdrawal of the obviousness rejections of claims 9, 13-16, 18-20, 25-27, and 29-31.

#### **E. Finality**

It is respectfully noted that because the Office Action fails to set forth sufficient facts to provide a *prima facie* basis for the rejections, any future rejection based on the applied reference will necessarily be factually based on an entirely different portion of that reference, and thus will be legally defined as a "new grounds of rejection." Consequently, any Office Action containing such rejection can not properly be made final. *See In re Wiechert*, 152 USPQ 247, 251-52 (CCPA 1967) (defining "new ground of rejection" and requiring that "when a rejection is factually based on an entirely different portion of an existing reference the appellant should be afforded an opportunity to make a showing of unobviousness vis-a-vis such portion of the reference"), and *In re Warner*, 379 F.2d 1011, 154 USPQ 173, 178 (CCPA 1967) (the USPTO "has the initial duty of supplying the factual basis for its rejection").

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**The Present Office Action Fails to Respond to All of Applicant's Arguments**

A proper Office Action must be complete as to all matters, must provide a clear explanation of all actions taken, and must answer in detail the substance of each of Applicant's submitted arguments. *See* MPEP 707.07(f).

In response to an Office Action dated 17 January 2006, Applicant filed a proper Reply on 12 April 2006, which is incorporated herein by reference. In traversing a rejection of claims 9, 13-16, 18, 19, 20, 25, 26, 29, 30, and 31, Applicant presented the following argument that stands unopposed in the present Office Action:

"The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." MPEP 2142. The requirements for meeting this burden are clear.

To establish a *prima facie* case of obviousness, an explanation must be provided stating why proposed modifications would have been obvious to one of ordinary skill in the art at the time the invention was made. *See*, MPEP §706.02(j). In other words, "there must be some suggestion..., either in the reference[]... or in the knowledge generally available to one of ordinary skill in the art, to modify the reference". *See* MPEP 2143.

According to the Federal Circuit the "mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 23 USPQ 2d 1780, 1783-784 (Fed. Cir. 1992) (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988)). In that same case, the Federal Circuit further held that it "is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.'" *Id.*, 23 USPQ 2d at 1784.

The present Office Action recites conclusory statements that:

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1. “[r]egarding claim 9” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 3.*
2. “[r]egarding claim 19” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 4.*
3. “[r]egarding claim 30” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 6.*
4. “[r]egarding claim 13” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 7.*
5. “[r]egarding claim 14” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 8.*
6. “[r]egarding claim 15” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 9.*
7. “[r]egarding claim 29” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Pages 10-11.*
8. “[r]egarding claim 16” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 12.*
9. “[r]egarding claim 18” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See Page 13.*

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10. “[r]egarding claim 20” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See* Page 14.

11. “[r]egarding claim 25” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See* Pages 14-15.

12. “[r]egarding claim 26” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See* Page 16.

13. “[r]egarding claim 31” “it is obvious that the data region could transmit any type of media, e.g. audio, video, and/or data”. *See* Page 20.

Yet, the present Office Action fails to establish a *prima facie* case of obviousness regarding at least claims 9, 13-16, 18, 19, 20, 25, 26, 29, 30, and 31, since the Office Action presents no explanation regarding why the proffered modifications would have been obvious to one of ordinary skill in the art at the time the invention was made.

The present Office Action fails to respond whatsoever to this previously presented and persuasive argument. Thus, Applicant respectfully requests the withdrawal of each of the rejections of claims 9, 13-16, 18, 19, 20, 25, 26, 29, 30, and 31.

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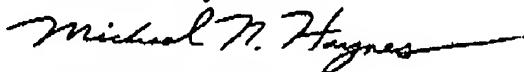
**CONCLUSION**

It is respectfully submitted that, in view of the foregoing amendments and remarks, the application as amended is in clear condition for allowance. Reconsideration, withdrawal of all grounds of rejection, and issuance of a Notice of Allowance are earnestly solicited.

The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. 1.16 or 1.17 to Deposit Account No. 50-2504. The Examiner is invited to contact the undersigned at 434-972-9988 to discuss any matter regarding this application.

Respectfully submitted,

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Date: 14 September 2006

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